Erratum: Electron rescattering in strong-field photodetachment of F− [Phys. Rev. A 91, 031404(R) (2015)]

Erratum: Electron rescattering in strong-field photodetachment of F^-

O. Hassouneh, S. Law, S. F. C. Shearer, A. C. Brown, and H. W. van der Hart
Centre for Theoretical Atomic, Molecular and Optical Physics,
Queen's University Belfast, Belfast BT7 1NN, UK
(Dated: April 16, 2015)

PACS numbers: 32.80.Gc 31.15.V-

Several omissions in our recent discussion on strong-field photodetachment [1] have been brought to our attention since the work was published. Calculations solving the time-dependent Schrödinger equation (TDSE) for electron rescattering from F^- have been carried out previously using the single active electron approximation [2, 3]. The ejected-electron distributions presented in [2, 3] show clear evidence for the importance of electron rescattering in strong-field photodetachment, and agree well with calculations based on the strong-field approximation.

Our ejected-electron spectra, presented in [1], show the same general features as in [2, 3]. However, our calculations are based on the solution of the TDSE for a full, 10-electron system, demonstrating the high quality of the final wavefunction obtained using a fully *ab initio* approach. The capability to describe all electrons also allows us to assess the importance of electron correlations in the multiphoton ionization process, thus going beyond the results previously reported in the literature.

As a consequence of our oversight of [2, 3], we misrepresented the results presented in [4] where the rescattering process was found but not shown explicitly [5].

Finally, we point out that early studies of the use of the strong field approximation for electron rescattering were previously presented in [6, 7]. More recently, angle resolved spectra have been measured experimentally for above threshold detachment of Br^-, with a strong-field approximation model providing almost indistinguishable theoretical results [8].

The authors would like to thank Wilhelm Becker and Dejan Milošević for their correspondence on this matter. OH acknowledges financial support from the University of Jordan. HWH acknowledges financial support from the UK EPSRC under grant no. EP/G055416/1 and the Initial Training Network CORINF under the Marie Curie Action of the European Commission. SL is funded by DEL-NI under the programme for government.

[1] O. Hassouneh, S. Law, S. F. C. Shearer, A. C. Brown, and H. W. van der Hart, Phys. Rev. A **91**, 031404 (2015).
[2] B. Fetić, W. Becker, and D. B. Milošević, J. Mod. Opt. **58**, 1149 (2011).
[3] X. X. Zhou, Z. Chen, T. Morishita, A.-T. Le, and C. D. Lin, Phys. Rev. A **77**, 053410 (2008).
[4] P. A. Korneev, S. V. Popruzhenko, S. P. Goreslavski, W. Becker, G. G. Paulus, B. Fetić, and D. B. Milošević, New J. Phys. **14**, 055019 (2012).
[5] W. Becker and D. B. Milošević (2015), private communication.
[6] D. B. Milošević, A. Gazibegović-Busuladžić, and W. Becker, Phys. Rev. A **68**, 050702 (2003).
[7] M. V. Frolov, N. L. Manakov, E. A. Pronin, and A. F. Starace, Phys. Rev. Lett. **91**, 053003 (2003).
[8] A. Gazibegović-Busuladžić *et al.*, Phys. Rev. Lett. **104**, 103004 (2010).